

Name: \_\_\_\_\_

### Remediation – Solving Literal Equations

After you have watched the video from the wiki, you should try the following problems and then use the key to check your work. If you are successful on this worksheet, take the re-evaluation quiz. Be sure to follow the directions there.

Directions: Please solve the following equations for the indicated variable.

1.  $ax + b = -c$  for  $x$   
 $-b$   $-b$

$$\frac{ax}{a} = \frac{-c-b}{a}$$

$$x = \frac{-c-b}{a}$$

2.  $A = \pi r^2$  for  $r$

$$\frac{A}{\pi} = r^2$$

$$r = \pm \sqrt{\frac{A}{\pi}}$$

$$r = \sqrt{\frac{A}{\pi}}$$

3.  $A = \frac{1}{2}bh$  for  $h$

$$2A = bh$$

$$\frac{2A}{b} = h$$

4.  $A = \frac{1}{2}h(b_1 + b_2)$  for  $b_1$

$$2A = h(b_1 + b_2)$$

$$\frac{2A}{h} = b_1 + b_2$$

$$b_1 = \frac{2A}{h} - b_2$$

5.  $ax + r = bx - f$  for  $x$

$$ax - bx + r = -f$$

$$ax - bx = -f - r$$

$$x(a-b) = -f - r$$

$$x = \frac{-f-r}{a-b}$$

6.  $a(x+b) = -m$  for  $a$

$$a = \frac{-m}{x+b}$$

7.  $a(x+b) = -m$  for  $x$

$$x+b = \frac{-m}{a}$$

$$x = \frac{-m}{a} - b$$

8.  $\frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$  for  $T_1$

$$\frac{T_1}{P_1 V_1} = \frac{T_2}{P_2 V_2}$$

$$T_1 = \frac{P_1 V_1 T_2}{P_2 V_2}$$

9.  $PV = nRT$  for  $n$

$$\frac{PV}{RT} = n$$

10.  $r(x+b) - 2x = 9$  for  $x$

$$rx + rb - 2x = 9$$

$$rx - 2x = 9 - rb$$

$$(r-2)x = 9 - rb$$

$$x = \frac{9-rb}{r-2}$$

11.  $\frac{R}{T} = \frac{D}{T}$  for  $T$

$$RT = D$$

$$T = \frac{D}{R}$$